REMARKS

Claims 1-29 were pending and stand rejected in the Final Office Action dated February 26, 2002. By way of this preliminary amendment, claims 1, 19, 20, and 28 have been amended. Claim 18 has been cancelled without prejudice or disclaimer to the subject matter therein. New claims 58-61 have been added. Support for the new claims can be found in the specification at, for example, page 12, lines 13-18 (claims 59 and 59) and page 11, line 24, through page 12, line 3 (claim 60 and 61). Thus, no new matter has been added. Reconsideration is respectfully requested in view of the above amendments and the following remarks.

Claims 1-20 and 22-29 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Blauer et al. in view of Henn et al. for the reasons of record. Applicants respectfully traverse this rejection and submit that the combination of Blauer et al. and Henn et al. is improper.

Applicants respectfully submit that at the time the invention was made, the combination of Blauer et al. and Henn et al. taken as a whole would not suggest the presently claimed invention to one of ordinary skill in the art. Blauer et al. relates to a shell for outerwear that achieves vapor permeability, water repellency, wind obstruction, stain resistance, dimensional stability, and external durability. The shell is composed of a woven, synthetic fabric which is initially impregnated with a protective material and printed on its interface with a stratum composed of a high tensile strength material. The printed stratum covers from 10 to 90 percent of the surface area of the interface of the fabric and may be in a variety of patterns. Dimensional stability of the shell is provided by the printed stratum. Applicants note that the printed stratum is applied directly to the woven, synthetic fabric of the shell. Thus, what can be gleaned from the teaching of Blauer et al. is that a woven, synthetic fabric shell can be provided with dimensional stability by providing a printed stratum directly to the woven, synthetic fabric shell.

Quite distinct from Blauer, Henn et al. teaches a two-layer construction consisting of a monolithic or continuous layer of water-vapor-perm able

hydrophilic polymer on a microporous scaffold, bonded to a fabric substrate. This two-layer construction is quite different from the construction disclosed by Blauer et al. Moreover, there is nothing which would suggest that "dimensional stability" is a problem or even a consideration of the articles produced by the teaching of Henn et al.

The presently claimed invention claims, among other things, a composite material comprising a water-resistant, water-vapor-permeable, flexible porous membrane substrate having a first and second side, where the fabric is secured to the first side of the substrate and a plurality of discreet abrasion-resisting polymeric dots forming a discontinuous lining-forming pattern are applied over the surface of the second side of the flexible porous membrane substrate and which dots resist abrasion of the flexible substrate. The polymeric dots are not applied to the fabric side of the claimed composite material.

It is not seen how, at the time the invention was made, an artisan of ordinary skill would have been motivated to combine the teachings of Blauer et al. which disclose applying the printed stratum directly to the woven, synthetic fabric to provide improved dimensional stability, with the teaching of Henn et al. which relates to completely different waterproof material (i.e., a waterproof material comprising, among other things, a microporous scaffold bonded to a fabric substrate.) It is only through impermissible hindsight reconstruction that the Examiner is able to conclude that it would be obvious to take the printed stratum of Blauer et al. (which is applied to the woven synthetic fabric) and combine it with the microporous scaffold of Henn to somehow conclude that it would be obvious to take the printed stratum of Blauer and apply it to the claimed porous membrane of the instant invention. Indeed, this combination of references is simply inconceivable without the benefit of applicants' disclosure. Accordingly, applicants respectfully submit that this rejection should be withdrawn.

Since the remaining rejections rely upon the combination of Blauer et al. and Henn et al., these rejections fail as well. Accordingly, applicants respectfully request that these rejections be withdrawn as well.

overcome, applicants respectfully request issuance of a Notice of Allowance directed toward claims 1-17, 19-29, and 58-61. Should the Office have any questions, the Office is invited to telephone applicants' undersigned representative.

Respectfully submitted,

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REWRITTEN CLAIMS IN MARKED UP FORM PURSUANT TO 37.C.F.R. 121(c)(1)(ii):

1. A composite material for a garment comprising
   (a) a water-resistant, water-vapour-permeable, flexible porous membrane substrate having a first and second side;
   (b) a fabric secured to said first side of the substrate; and
   (c) a plurality of discrete abrasion-resisting polymeric dots forming a discontinuous lining-forming pattern over the surface of said second side of the substrate and which dots resist abrasion of the flexible substrate.

19. A composite material as claimed in claim 1[8], in which the porous membrane is expanded polytetrafluoroethylene.

20. A composite material as claimed in claim 1[8], in which the substrate comprises the porous membrane and a coating of a water-vapour-permeable hydrophilic polymer and to which coating the dots are secured.

28. A garment formed of a composite material comprising
   (a) a water-resistant, water-vapour-permeable, flexible porous membrane substrate having a first and second side;
   (b) a fabric secured to said first side of the substrate; and
   (c) a plurality of discrete abrasion-resisting polymeric dots forming a discontinuous lining-forming pattern over the surface of said second side of the substrate and which dots resist abrasion of the flexible substrate.

CLEAN VERSION OF ALL CLAIMS

1. A composite material for a garment comprising
   (a) a water-resistant, water-vapour-permeable, flexible porous membrane substrate having a first and second side;
   (b) a fabric secured to said first side of the substrate; and
   (c) a plurality of discrete abrasion-resisting polymeric dots forming a discontinuous lining-forming pattern over the surface of said second side of the substrate and which dots resist abrasion of the flexible substrate.

2. A composite material as claimed in claim 1, in which the dots have a substantially smooth, non-angular profile.

3. A composite material as claimed in claim 2, in which each of the dots has a cross-section in the plane of the substrate which is substantially circular and a cross-section which is substantially part-spherical in a plane normal to the substrate.

4. A composite material as claimed in claim 1, in which the maximum dimension of the cross-section in the plane of the substrate is less than 5000 microns.

5. A composite material as claimed in claim 4, in which said maximum dimension is from 100 to 1000 microns.

6. A composite material as claimed in claim 5, in which said maximum dimension is from 200-800 microns.

7. A composite material as claimed in claim 6, in which said maximum dimension is from 400-600 microns.

8. A composite material as claimed in claim 7, in which each dot has a height in the range of 10 to 200 microns.

9. A composite material as claimed in claim 8, in which each dot has a height in the range of 70 to 140 microns.

10. A composite material as claimed in claim 9, in which each dot has a height in the range of 80 to 100 microns.

11. A composite material as claimed in claim 1, in which the centre of each dot is spaced from the centre of an adjacent dot by 200 to 2000 microns.

12. A composite material as claimed in claim 11, in which the centre of each dot is spaced from the centre of an adjacent dot by 300 to 1500 microns.

13. A composite material as claimed in claim 12, in which the centre of each dot is spaced from the centre of an adjacent dot by 400 to 900 microns.

14. A composite material as claimed in claim 1, in which the ratio of the distance between centres of adjacent dots, the maximum dimension of each dot and the height of each dot is within the range of about 7.5:5:1 to about 15:10:1.

15. A composite material as claimed in claim 1, in which the percentage coverage of the surface of the substrate by the dots is 20 to 80%.

16. A composite material as claimed in claim 15, in which the percentage coverage of the surface of the substrate by the dots is 30 to 70%.

17. A composite material as claimed in claim 16, in which the percentage coverage of the surface of the substrate by the dots is 40 to 60%.

18. Cancelled

19. A composite material as claimed in claim 1, in which the porous membrane is expanded polytetrafluoroethylene.

20. A composite material as claimed in claim 1, in which the substrate comprises the porous membrane and a coating of a water-vapour-

permeable hydrophilic polymer and to which coating the dots are secured.

21. A composite material as claimed in claim 20, in which the hydrophilic polymer is a polyurethane or polyester.

22. A composite material as claimed in claim 1, in which said dots are formed from an abrasion-resisting polyurethane having an elastic modulus greater than about 800 psi (5.5 Nmm^{-2}).

23. A composite material as claimed in claim 21, in which the dot-forming polyurethane is water-vapour-permeable.

24. A composite material as claimed in claim 1, in which the material was a water resistance of greater than 0.1 kg/cm.

25. A composite material as claimed in claim 1, in which the material has a water-vapour-permeability in excess of 1500 g/m^2/day.

26. A composite material as claimed in claim 1, in which the dots are applied in the form of a plurality of rosettes.

27. A composite material as claimed in claim 1, in which the abrasion resistance of the composite material is at least 1.5 times the abrasion resistance of the flexible substrate alone.

28. A garment formed of a composite material comprising
    (a) a water-resistant, water-vapour-permeable, flexible porous membrane substrate having a first and second side;
    (b) a fabric secured to said first side of the substrate; and
    (c) a plurality of discrete abrasion-resisting polymeric dots forming a discontinuous lining-forming pattern over the surface of said second side of the substrate and which dots resist abrasion of the flexible substrate.

29. A garment as claimed in claim 28, in which the abrasion-resisting polymeric dots form the innermost component of the garment to form a lining.

58. A composite material as claimed in claim 27, in which the abrasion resistance of the composite material is at least 4 times the abrasion resistance of the flexible substrate alone.

59. A composite material as claimed in claim 58, in which the abrasion resistance of the composite material is at least 10 times the abrasion resistance of the flexible substrate alone.

60. A garment as claimed in claim 29, wherein the garment further contains stitched seams.

61. A garment as claimed in claim 60, wherein the stitched seams are sealed to prevent liquid water from entering through the stitched seams by applying a tape over the stitched seams.

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COMMENTS:

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